

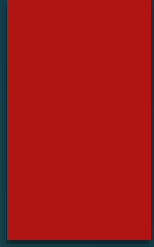


REMOTE SENSING in FISHERIES

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Satellites


- ▶ With the use of satellites as remote sensing platforms it has been possible to overcome some of the difficulties encountered in remote sensing with aircraft. Satellites can monitor the entire earth surface on a periodic basis, covering a sizeable section on each revolution. Satellites designed for remote sensing on an operational basis are generally unmanned. Nevertheless, some manned satellites have provided valuable information despite the short duration of their mission, e.g., SKYLAB, SOYUZ and space shuttles.



Global Acquisition Systems

- ▶ The global acquisition sensors commonly used for oceanographic studies are aerial, vidicon and underwater cameras. Underwater cameras are not considered in this manual.
- ▶ **Aerial cameras**
- ▶ These are one of the simplest forms of imaging system used in fisheries and ocean studies. The detector is a photographic emulsion (film) which is sensitive to the visible or near-infrared parts of the electromagnetic spectrum. Cameras, films and photo interpretation are discussed in more detail in a companion training manual “Marine Resource Mapping: an Introductory Manual” (FAO Technical Paper 274).



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- ▶ Cameras have been in use for a long time and a great deal of knowledge has accumulated regarding techniques of image recording, image interpretation and data extraction. Cameras are less expensive and less cumbersome than other sensors and photographic materials are available world-wide. In addition, photography still produces superior resolution in comparison to electronic sensors.
 - ▶ One of the major disadvantages in the use of aerial cameras is the constraint imposed by adverse weather conditions. Also, photography is only operative within a narrow band of EMR (0.38 to 1.3 micrometres).
 - ▶ The quality of a photograph will depend on several interrelated factors: focal length; angle of view; scale; contrast; resolution; and film speed.

